1	CCGGTGCCAG	CCCAGGTGCT	CGCGGCCTGG	CTCCATGGCC	CTGGTCACAG	TGAGCCGTTC
61	GCCCCCGGGC	AGCGGCGCCT	CCACGCCCGT	GGGGCCCTGG	GACCAGGCGG	TCCAGCGAAG
121	GAGTCGACTC	CAGCGA <i>AG</i> GC	AGAGCTTTGC	GGTGCTCCGT	GGGGCTGTCC	TGGGACTGCA
181	GGATGGAGGG	GACAATGATG	ATGCAGCAGA	GGCCAGTTCT	GAGCCAACAG	AGAAGGCCCC
241	GAGTGAGGAG	GAGCTCCACG	GGGACCAGAC	AGACTTCGGG	CAAGGATCCC	AGAGTCCCCA
301	GAAGCAGGAG	GAGCAGAGGC	AGCACCTGCA	CCTCATGGTA	CAGCTGCTGA	GGCCGCAGGA
361	TGACATCCGC	CTGGCAGCCC	AGCTGGAGGC	ACCCCGGCCT	CCCCGGCTCC	GCTACCTGCT
421	GGTAGTTTCT	ACACGAGAAG	GAGAAGGTCT	GAGCCAGGAT	GAGACGGTCC	TCCTGGGCGT
481	GGATTTCCCT	GACAGCAGCT	CCCCCAGCTG	CACCCTGGGC	CTGGTCTTGC	CCCTCTGGAG
541	TGACACCCAG	GTGTACTTAG	ATGGAGACGG	GGGCTTCAGC	GTGACGTCTG	GTGGGCAAAG
601	CCGGATCTTC	AAGCCCATCT	CCATCCAGAC	CATGTGGGCC	ACACTCCAGG	TATTGCACCA
661	AGCATGTGAG	GCAGCTCTAG	GCAGCGGCCT	TGTACCGGGT	GGCAGTGCCC	TCACCTGGGC
721	CAGCCACTAC	CAGGAGAGAC	TGAACTCCGA	ACAGAGCTGC	CTCAATGAGT	GGACGGCTAT
781	GGCCGACCTG	GAGTCTCTGC	GGCCTCCCAG	CGCCGAGCCT	GGCGGGTCCT	CAGAACAGGA
841	GCAGATGGAG	CAGGCGATCC	GTGCTGAGCT	GTGGAAAGTG	TTGGATGTCA	GTGACCTGGA
901	GAGTGTCACT	TCCAAAGAGA	TCCGCCAGGC	TCTGGAGCTG	CGCCTGGGGC	TCCCCCTCCA
		GACTTCATCG				
1021	CTCCCGCATC	TTCCCCCACC	TCTACCTGGG	CTCAGAGTGG	AACGCAGCAA	ACCTGGAGGA
		AACAGGGTCA		•		
1141	CCCTGAGCGC	TTCACCTACC	ACAATGTGCG	CCTCTGGGAT	GAGGAGTCGG	CCCAGCTGCT
1201	GCCGCACTGG	AAGGAGACGC	ACCGCTTCAT	TGAGGCTGCA	AGAGCACAGG	GCACCCACGT
1261	GCTGGTCCAC	TGCAAGATGG	GCGTCAGCCG	CTCAGCGGCC	ACAGTGCTGG	CCTATGCCAT
1321	GAAGCAGTAC	GAATGCAGCC	TGGAGCAGGC	CCTGCGCCAC	GTGCAGGAGC	TCCGGCCCAT
1381	CGCCCGCCCC	AACCCTGGCT	TCCTGCGCCA	GCTGCAGATC	TACCAGGGCA	TCCTGACGGC
1441	CAGCCGCCAG	AGCCATGTCT	GGGAGCAGAA	AGTGGGTGGG	GTCTCCCCAG	AGGAGCACCC
1501	AGCCCCTGAA	GTCTCTACAC	CATTCCCACC	TCTTCCGCCA	GAACCTGAGG	GTGGTGGGGA
1561	GGAGAAGGTT	GTAGGCATGG	AAGAGAGCCA	GGCAGCCCCG	AAAGAAGAGC	CTGGGCCACG
1621	GCCACGTATA	AACCTCCGAG	GGGTCATGAG	GTCCATCAGT	CTTCTGGAGC	CCTCCTTGGA
1681	GCTGGAGAGC	ACCTCAGAGA	CCAGTGACAT	GCCAGAGGTC	TTCTCTTCCC	ACGAGTCTTC
1741	ACATGAAGAG	CCTCTGCAGC	CCTTCCCACA	GCTTGCAAGG	ACCAAGGGAG	GCCAGCAGGT
		CCTCAGCCTG			the state of the s	
1861	TGCCGTGGTG	GCCAACCGGA	CCCAGGCCTT	CCAGGAGCAG	GAGCAGGGC	AGGGGCAGGG
1921	GCAGGGAGAG	CCCTGCATTT	CCTCTACGCC	CAGGTTCCGG	AAGGTGGTGA	GACAGGCCAG
1981	CGTGCATGAC	AGTGGAGAGG	AGGGCGAGGC	C TGA GCCCTC	ACACATGCCC	ACGCTCCCCT
2041	GACACTGAAG	AGGATCCACA	ACTCCTTGGA	GAAACACCCT	CACGTCTGTT	GCCGCACACA
2101	TTCCTCTCAG	CTCCGCCCCA	TACCCGTCAC	TACAGCCTCA	CCTCCCACCC	CTGTCACTAC
2161	GGCCTCACCT	CCCACCCCTG	TCACTACAGC	CTCACCTCCT	ACAGCCTTAA	GTCCCAGGCC
2221	CATGTCTGCC	TGTCCAAGGG	CTCAAGACTT	TCTAACTGGG	ATGTGGTAGA	GGGACTGAAG
2281	GTACCTTTGG	GGGCAACAGC	ACCCTAGTTT	CATTCTCAAC	TCTAGCCCTG	CACACTCACC
2341	TGTGGCACGG	AATGAAAACA	GAGCTTCCCG	TGCAAAAAGG	GTCACGCCTC	CCACCCCCGC
		CACCTCCTGT				
		CCAAAGGCAG				
		CTTCCCTCAT				
		ACCACGCCAG				
		CTGGCTAGTC				
2701	AATAAAACAC	ATTTTCAT				

programs states them there is not some much court to the first of the

MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEASSEPTEKAPSEEELHGD QTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAPRPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDS SSPSCTLGLVLPLWSDTQVYLDGDGGFSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASH YQERLNSEQSCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLDVSDLESVTSKEIRQALELRLGLPL QQYRDFIDNQMLLLVAQRDRASRIFPHLYLGSEWNAANLEELQRNRVTHILNMAREIDNFYPERFTYHNVRLWDEES AQLLPHWKETHRFIEAARAQGTHVLVHCKMGVSRSAATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQI YQGILTASRQSHVWEQKVGGVSPEEHPAPEVSTPFPPLPPEPEGGGEEKVVGMEESQAAPKEEPGPRPRINLRGVMR SISLLEPSLELESTSETSDMPEVFSSHESSHEEPLQPFPQLARTKGGQQVDRGPQPALKSRQSVVTLQGSAVVANRT OAFOEQEQGQGQGGPCISSTPRFRKVVRQASVHDSGEEGEA

and, only the presentation of the control of the co

8 T	ERIS ERIS ERIE	KSIE ERIS Fath		KETHE	1			٠		
80	SCRKDSTNLDVLGKYGIKYILNYTPNLPNAFEHGGEFTYKQIPISDHASQNLSQFFPERIS 3SARDSANLESLAKLGIRYILNYTPNLPNFFEKNGDFHYKQIPISDHASQNLSQFFPERIS 3SOKDVI NKOI HTONGICYVI NOCH	SCHHSSDLQGLQRCGITRYLNYSASCPNHFEGLFHYKSIPYEDNQMYEISAHFQERIS SRYHRSRKDMLDRLGITRLINYSANCPNHFEGHYQYKSIPYEDNQMYEISAHFQERIS	SHYHRRRDHLORLGITALLNYSSDCPNHFEGHYQYKCIPYEDNHKRDISSUFNERIE SAYHASKCEFLANLHITALLNYSRRTSEACMTHLHYKUIPYEDSHTADISSHFQEAID NASYAQDIPKLQKLGITHYLNAREGRSFHHVNTNANEYKOSGTTYI GTKOUDTOFFUL SOYFFDEAD	HEGTHHHQQRPYLSQQHPSFILNSSPAHSPHAREIDNFYPERFTYHNYRLHDEESAQLLPHHKETHR 18888181LNvspn.ffxXk.!pD18f.eai.						
70	EFTYKQIPISI BEFTYKQIPISI DFHYKQIPISI	ESKFAKVPINI LFHYKSIPVEC HYOYKSIPVET	HYQYKCIPYED HLHYKHIPYED GTTYL GTKOUR	RFTYHNYRLMD	160 164	LDFERTLGLS	LOFERSLRLE FYERT KII	LQLETQVLCH LQFESQVLAP	LOFESOVLAT LOYESEILPS	CQLNDRLAKE QIYQGILTAR 1#l
09	-NLPNRFEHGG -NLPNFFEKNG	SCPNHFE-6 -SCPNHFE-6 -NCPNHFE-6	-OCPNHFEG -RTSERCHT UNTMRNEYENC	REIDNFYPE	150	ISPNFNFHGQL	ISPNFNFNGOL ISPNFNFNGOL ISPNFNFI GOI	(SPNFSFNGQL)	(SPNFSFNGQL) /SPNFGFNGQL)	GPNDGFLRQL IRPNPGFLRQL SPNF.F\$gQL
50 NUTD	NVTP	NVSR	NVSS NVSR MRREGRSFHH	NSSPAHSPHAN NVS	140	YOLVKHKKSN	YOL VKRKKSNI YRFVKDRRPSI	- dfvkgrr gv) Fefvkgrrs <u>t</u> j	-EFVKORRSI -DYIKORRSHI	.SIVRQNRE-J .RHVQELRPIF !krj
40 	CAKDSTAL DYLGKYGIKYIL NYTPSARDSANLESLAKLGIRYIL NYTP	SCHISSDLQGLQRCGITAYLNYSASRYHRSRKDHLDALGITALINYSA	LORLGITALL Lanlhitall Loklgithyl	"LSQQHPSFIL \$giL	130	QKLNLSHNDRYDIVKHKI QKHNI SI NDRYDEVKPKI	QKLHLSLNDA KTHGHSSDDA	QSHRVRLDEA Rtnrvkldea	NKKKVRLEEN KTKOFRLKEN	MRQKMDYKSRI KQYECSLEQAI ************************************
30 GCRKDSTNI DVI	GCRKDSTNLD GSRRDSANLE GSOKDVI MKDI		ISHYHRRRDI BSRYHRSKCEF BNRSYRQDIPK	ЕСТИНИДОКРУ 888-	120	SYTYTYBYL HOK	SSVTVTVRYLH SSRTIRIRYIH	SATICLAYLI SATICLAYLI	SPTICHAYLA	SPILVLHYLR SRRTVLAYRK SatRYlK
20 PVEILPFLYL	PVQILPYLYL PVQILPNLYL ILTRILPHLYL	PVEILPYLYL PVEILPFLYL	PVEILPFLYL PVEILPFLYL CNEYTPRIYY	M Pveilp,lyl	110	VLVHCLAGISF VLVHCLAGISF	VLVHCLAGYSK VIVHCLAGISK	VLVHCQAGISK VFVHCQAGISK MLVHCQAGISK	VLVHCEAGISF	vivackeorsk VLVACKMGVSR VIVAC.aGiSR
1 10 20 	OGSPYPSSQPAFPYQILPYLYL Atpppyglrasfpyqilpnlyl Lsqpclpypsygltriiphiyi	SDPRVPIYDQGGPVEILPYLYLG SSCSTPLYDQGGPVEILPFLYLG SECETPLYDQGGPVEILPFLYLG	SSCOTTENDUGGEVELLPELTLO NVSYRPAYDQGGPVEILPFLYLG DGSGCYSLPSQPCNEVTPRIYYG	HEGTHHUGGRPYLSGQHPSFILNSSPAHSPHAREIDNFYPERFTYHNVRLHDEESAQLLPHH **********************************	91 100 110	FIDEA-RGKNCGVLYHCLAGISRSYTYTYAYLHQKLNLSHNDAYDIYKMKKSNISPNFNFHGQLLDFERTLGLS FIDEA-RSKKCGVLYHCLAGISRSYTYTYAYLHOKANI SI NDAYDFUKPKKSNISDAGAGAI LAFFATI SI S	FIDEA-LSQNCGVLYHCLAGYSRSYTYTYAYLAGKLHLSLNDAYDLYKRKKSNISPNFNFHGQLLDFERSLRLE FIDKA-KLSSCQVIVHCLAGISRSATIAIAYIMKTAGASSDDAYRFYKDRRPSISPNFNF1 GOI I FYFPT1 KI	-IDSV-KNSGGRVLVHCQRGISRSATICLAYLIQSHRVRLDEAFDFVKQRRGVISPNFSFNGQLLQLETQVLCH IDSI-KNRGGRVFVHCQRGISRSATICLAYLHRTNRVKLDEAFEFVKQRRSIISPNFSFNGQLLQFESQVLGH 7TDRV_KNFDGDW YUKGOKTEBEGYTG	FIDCY-REKGGKYLYHCERGISRSPTICHRYLHKKKYRLEERFEFYKQRRSIISPNFSFHGGLLQFESQYLAT FIDCY-REKGGKYLYHCERGISRSPTICHRYLHKTKQFRLKEAFDYIKQRRSHYSPNFGFHGGLLQYESEILPS FINGS OOKNGON WIGHTGAGGET, WITHIN	FIERA-RAGGTHYLYHCKEGISKSPILYLAYYLAHKQKADYKSALSIYRQNRE-IGPNOGFLAGLCQLNDRLAKE FIERA-RAGGTHYLYHCKMGYSRSARTYLAYANKQYECSLEQALRHYQELRPIARPNPGFLRQLQIYQGILTAR FI#.aylyHC.aGiSRSatAYlNsl8.ikrisPNf.F\$gQLl#l
PYST1	HKP-4 HKP-4 HVH5	FRC1	MKP-5	HKUUT/30 Consensus	- • •			EKP-1		

1 CCGGTGCCAG CCCAGGTGCT CGCGGCCTGG CTCCATGGCC CTGGTCACAG TGAGCCGTTC 61 GCCCCGGGC AGCGGCGCCT CCACGCCCGT GGGGCCCTGG GACCAGGCGG TCCAGCGAAG 121 GAGTCGACTC CAGCGAAGGC AGAGCTTTGC GGTGCTCCGT GGGGCTGTCC TGGGACTGCA 181 GGATGGAGGG GACAATGATG ATGCAGCAGA GGCCAGTTCT GAGCCAACAG AGAAGGCCCC 241 GAGTGAGGAG GAGCTCCACG GGGACCAGAC AGACTTCGGG CAAGGATCCC AGAGTCCCCA 301 GAAGCAGGAG GAGCAGAGGC AGCACCTGCA CCTCATGGTA CAGCTGCTGA GGCCGCAGGA 361 TGACATCCGC CTGGCAGCCC AGCTGGAGGC ACCCCGGCCT CCCCGGCTCC GCTACCTGCT 421 GGTAGTTTCT ACACGAGAAG GAGAAGGTCT GAGCCAGGAT GAGACGGTCC TCCTGGGCGT 481 GGATTTCCCT GACAGCAGCT CCCCCAGCTG CACCCTGGGC CTGGTCTTGC CCCTCTGGAG 541 TGACACCCAG GTGTACTTAG ATGGAGACGG GGGCTTCAGC GTGACGTCTG GTGGGCAAAG 601 CCGGATCTTC AAGCCCATCT CCATCCAGAC CATGTGGGCC ACACTCCAGG TATTGCACCA 661 AGCATGTGAG GCAGCTCTAG GCAGCGGCCT TGTACCGGGT GGCAGTGCCC TCACCTGGGC 721 CAGCCACTAC CAGGAGAGAC TGAACTCCGA ACAGAGCTGC CTCAATGAGT GGACGGCTAT 781 GGCCGACCTG GAGTCTCTGC GGCCTCCCAG CGCCGAGCCT GGCGGGTCCT CAGAACAGGA 841 GCAGATGGAG CAGGCGATCC GTGCTGAGCT GTGGAAAGTG TTGGATGTCA GTGACCTGGA 901 GAGTGTCACT TCCAAAGAGA TCCGCCAGGC TCTGGAGCTG CGCCTGGGGC TCCCCCTCCA 961 GCAGTACCGT GACTTCATCG ACAACCAGAT GCTGCTGCTG GTGGCACAGC GGGACCGAGC 1021 CTCCCGCATC TTCCCCCACC TCTACCTGGG CTCAGAGTGG AACGCAGCAA ACCTGGAGGA 1081 GCTGCAGAGG AACAGGGTCA CCCACATCTT GAACATGGCC CGGGAGATTG ACAACTTCTA 1141 CCCTGAGCGC TTCACCTACC ACAATGTGCG CCTCTGGGAT GAGGAGTCGG CCCAGCTGCT 1201 GCCGCACTGG AAGGAGACGC ACCGCTTCAT TGAGGCTGCA AGAGCACAGG GCACCCACGT 1261 GCTGGTCCAC TGCAAGATGG GCGTCAGCCG CTCAGCGGCC ACAGTGCTGG CCTATGCCAT 1321 GAAGCAGTAC GAATGCAGCC TGGAGCAGGC CCTGCGCCAC GTGCAGGAGC TCCGGCCCAT 1381 CGCCCGCCC AACCCTGGCT TCCTGCGCCA GCTGCAGATC TACCAGGGCA TCCTGACGGC 1441 CAGAACC<u>TGA</u> GGGTGGTGGG GAGGAGAGG TTGTAGGCAT GGAAGAGAG CAGGCAGCCC 1501 CGAAAGAAGĀ GCCTGGGCCA CGGCCACGTA TAAACCTCCG AGGGGTCATG AGGTCCATCA 1561 GTCTTCTGGA GCCCTCCTTG GAGCTGGAGA GCACCTCAGA GACCAGTGAC ATGCCAGAGG 1621 TCTTCTCTTC CCACGAGTCT TCACATGAAG AGCCTCTGCA GCCCTTCCCA CAGCTTGCAA 1681 GGACCAAGGG AGGCCAGCAG GTGGACAGGG GGCCTCAGCC TGCCCTGAAG TCCCGCCAGT 1741 CAGTGGTTAC CCTCCAGGGC AGTGCCGTGG TGGCCAACCG GACCCAGGCC TTCCAGGAGC 1801 AGGAGCAGGG GCAGGGGCAG GGGCAGGGAG AGCCCTGCAT TTCCTCTACG CCCAGGTTCC 1861 GGAAGGTGGT GAGACAGGCC AGCGTGCATG ACAGTGGAGA GGAGGGCGAG GCCTGAGCCC 1921 TCACACATGC CCACGCTCCC CTGACACTGA AGAGGATCCA CAACTCCTTG GAGAAACACC 1981 CTCACGTCTG TTGCCGCACA CATTCCTCTC AGCTCCGCCC CATACCCGTC ACTACAGCCT 2041 CACCTCCCAC CCCTGTCACT ACGGCCTCAC CTCCCACCCC TGTCACTACA GCCTCACCTC 2101 CTACAGCCTT AAGTCCCAGG CCCATGTCTG CCTGTCCAAG GGCTCAAGAC TTTCTAACTG 2161 GGATGTGGTA GAGGGACTGA AGGTACCTTT GGGGGCAACA GCACCCTAGT TTCATTCTCA 2221 ACTCTAGCCC TGCACACTCA CCTGTGGCAC GGAATGAAAA CAGAGCTTCC CGTGCAAAAA 2281 GGGTCACGCC TCCCACCCCC GCCCCCTCCC TGCACCTCCT GTCCTCTCCC AGTTCATTCC 2341 TGGAACCAGC CAGGCCAGGC AACCAGTGGC CCCCAAAGGC AGGCAGGATC CTCAGGCCCC 2401 AGCCGCGGA GGCTGGAAGG GCTGGCAGAT CGCTTCCCTC ATCCACCTCC ACCGGTCCAG 2461 GTCTTTGCTG CTGTCCCCAG ACCTCCTGTG ACACCACGCC AGATCACAGG GCACCAGGCC 2521 AGAGATAGTC TTCTTTTGT CCTTTCTGGC CTCTGGCTAG TCAGTTTTTC ATAGCCTTAC 2581 AGTATCTGGC TTTGTACTGA GAAATAAAAC ACATTTTC

And the state of t

MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEASSEPTEKAPSEEELHGD QTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAPRPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDS SSPSCTLGLVLPLWSDTQVYLDGDGGFSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASH YQERLNSEQSCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLDVSDLESVTSKEIRQALELRLGLPL QQYRDFIDNQMLLLVAQRDRASRIFPHLYLGSEWNAANLEELQRNRVTHILNMAREIDNFYPERFTYHNVRLWDEES AQLLPHWKETHRFIEAARAQGTHVLVHCKMGVSRSAATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQIYQGILTART

0SP-15 88036834	1 HALVTVSRSP GSFRRI STRS	10 + SRSPPGSG STRSTESS	1 10 20 30 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 JOGRVQRR	30 FSRLQRRC	40 QSFRVLRGR	50 7-1.61.40660	60 DNDDAREASS	40 50 60 70 80 90 100 110 120 130 SFAVLRGAV-LGLQDGGDNDDRRERSSEPTEKRPSEELHGDQTDFGQGSQSPQKQEEQRQHLM NVQLIRPQDDTRLRRQLERPPRLRYLL	80 EELHGDGTE	90 DFGGGSQSPQ) JKQEEQRQH	100 HLHLHVQLL	110 RPQDDIRLE	120 HACLERPRP	130 PRLRYLL
DSP-13 DSP-12 Consensus	MTLSTL	RRKRKAPL	MATLSTLRRKRKRPLRCTCSLGGPDMIPYFSRNRVISI	GPONIPYFSAN	SRININT	SQNRICKOLI	SESFLTVKGF	KIKTLY1HSK ARLFLPRGNG	KED I LANNYKLESJAKSHR I KTLYIHSKSICKSG I SURRKHRIMRHISYKYGGSRGTKSSTSPRYPTQRQLSYEQTRTERSSKCOKTROKENTR QNRTNQLISESFLTYKGARLFLPRGNGSSTPRISHRRKHRGOLQQHLQAMFTILLRPEDNIRLRYRLESTYQNRTRYNY ***********************************	GISURRKHRINRHRS ISHRRKHR	HSVKVGGSR	RGTKSSTSP GDLQQH	PRVPTQRQL HLQAMFILL	TKSSTSPRVPTQRQLSVEQTRTERSSKCDKTRDKENRTR -GDLQQHLQRMFTLLRPEDNIRLRVRLESTYQNRTRYNV 	ISSKCDKTRI IVRLESTYQY	EXEN NATA
	131	140	150	160	0	170	180	190	200	210	220		සි	240	250	
0SP~15 RB036834 0SP-13 0SP-12 Consensus	VVSTREI AGDNKN VVSTNGI	GEGLSQUE TSGMEE RQDTEE	VVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVL RGDNKNTSGM-EESCLLGIDCNERTTIGLVV VVSTNGRQDTEESIVLGNDFSSNDSSTCTMGLVL MVL	FPOSSSPS CWERT	CTLGLVI CTHGLVI NVI L.E\$VJ	LPLKSOTQV VPILKOTTI LPLKSOTLI LRLKSOTKO LPLusOT. II	ALDGDGGFS/ HLDGDGGFS/ HLDGDGGFS/ HLDGDGGFS/ LDGDGGFS/	VISEGGSRIF VKVEKTHIF VSTDNRVHIF STRGRMHIF ISL. GF. hIF	LVLPLUSOTQVYLDGDGGFSVTSGGGSRIFKPISIGTHHRTLQVLHGRCERALGSGLVPGGSRLTHRSHYGERLNSEGSCLNEHTAHRDLESLRPPS ALVPPLLROTTHLDGDGGFSVKVYEKTHIFKPVSVQRHUSRLASLLHKVSKKRRENNFYRSCPSHDALSSYERRIESDGSCLNEHNAHDRLESRRPPS ALVPPLUSDTLIHLDGDGGFSVSTDNRVHIFKPVSVQRHUSRLGSLHKRCEVRRHNYYPGSLFLTUVSYYESKINSDGSSVNEHNAHQDVGSHRPDS NVLRLWSDTKTHLDGDGGFSVSTRGRHHIFKPVSVQRHUSRLQVLHKRCEVRRHNYFPGGVRLIMTYYESCISSEGSCINEHNAHQDLESTRPDS \$\$VIPIWEDT.!hLDGDGGFSVSL.gr.hIFKP!S!QahksalQvLHkacevRr.hny.pgg.al.Wasy*&s.1.S#GSc.NEHnRHqdl#S.RPGS	RTLQVLHQ SALQTLHK SALQSLHKG SALQVLHKG SALQVLHKG	ACERALGSGI VSKKARENNI ACEVARRHINI ACEVARRHINI ACEVARRHINI	LVPGGSRL1 FYRSGPSH YYPGSLFL1 YFPGGVRL3	THRSHYGE DHLSSYERI THVSYYESI CHRTYYESI Hasyy#s.	RINSEQUENT RIESDOSCIN HINSDOSSVI CISSEQUENT 1.5*QUENT	ENNAMOLE ENNAMOLE ENNAMOLE ENNAMOLE	ESER ESER OSHR ESTR #S.R
	261	270	280	230	Q	300	310	320	330	340	350		360	370	380	330
05P-15 RB036834 05P-13 05P-12 Consensus	AEP-G PORITANI PRLFTD: PRLFVDI Palf+dI	GSSEGEGN KPPEKEET IPTERERT KPTEGERT KPTEGERT	AEPGGSSEQEQNEGATRAELUKVLOVSOLESVTSI PORTRNKPPEKEETESVIKNKLKAIDMSVOLOEVTSI PALFTOIPTERERTERLIKTKLREIDMOKOLENTTSI PALFVOKPTEGERTERLIKAKLRSIDMSQOLENVTSI PALF & AKPLE.ELLEFIIKAKLR. ! \$ms. DL.#n!TSI	LAKVLOVS LKRIMMSV LREIMMQK LREIMMSQ Lr.!\$ns.	DLESVT: DLENTE DLENTE DLENVT: DL#n!TE	SKETROPLE SKYTRGRLEI SKETRTELEI SKETRNELEI SKETRNELEI	LRIGLPLOQUETLOCALOGUELACION CONTRACTOR CONTR	KOFIDNON KSFIDREN KEFIDNEN KEFIDNEN	KEIRGRLELRLGLPLQQYROFIDNQNLLLVRQRDRBSRIFPHLYLGSENWRNNLEELGRNRVTHII NYGREIDNFYPERFTYHNVRLUDEESRQ KYIRGRLEEILDNOLGEYKSFIDRENLVILGQNDRPTKIFEHVYLGSENWRNLELGRNGVRHILNVTREIDNFFPGTFEYFNVRVYDOEKTN KEIRTELEKGNVCHLREKKEFIDNENLVILGQNDSPTQIFEHVFLGSENWRNLEDGRRVRYILNVTREIDNFFPGVFFHNIRVYDEERTD KEIRNELEKGNNCHLKELKEFIDNENLLILGQNDRPSLIFDHLYLGSENNFSNLEELGGSGVOYIINVTREIDNFFPGLFAYHNIRVYDEETTD	SRIFPHLY TKIFEHVY TQIFEHVFI SLIFOHLY *.IF.HLX	GSEUNHRN GSEUNHSKU GSEUNHSKU GSEUNHSKU GSEUNHSKU	LEELORNRI LEELORNGI LEELORNGI LEELOGSGI EELOGSGI	THE NYBI PRYTE NYTI PRYTE NYTI POYTE NYTI	REIDNEPER REIDNEPER REIDNEPER REIDNEPER	ETYHNVRL) FEYFNVRV FEYHNIRV FRYHNIRV FRYHNIRV	YODEK YODEK YOEER YOEER
	391	400	410	420	0	430	440	450	460	470	480		490	200	510	520
USP-15 RB036834 USP-13 USP-12 Consensus	LLPHWK LLRYWO LLRYWO LLBHWN LLBHWN LLBHWN	ETHRFIEF DIFRYITS DIYKFISK ERYHFINK #68.XI.k	LLPHUKETHRFIEGRRAGGTHVLVHCKMGVSRSABT LLKYWDDTFRYIRRKREGSKYLVHCKMGVSRSASY LLAHWRDTYKFISKRKHGSKCLVHCKMGVSRSAST LLAHWRENYHFINKRKMHSKCLVHCKMGVSRSAST LLAHWAŁYŁZI, KAK., gSKCLVHCKMGVSRSAST	ALVHCKNG SLVHCKNG SLVHCKNG SLVHCKNG	VSRSASI VSRSASI VSRSASI VSRSASI VSRSASI		YECSLEGALF YQUEFQQALE YGUNLORRYI GUPLEKRYN YGU.1#.Ry	RHVDELRPIR EHVKRRSCI JYVKERRTVI IYVKQKRSII BVKRSIL	VLAYARKQYECSLEGALRHVQELRPIARPHPGFLRQLQTYQGILTASRQSHVREQKVGGVSPEEHPAPEVSTPFPPLPPEGGGEEKVVGKEE VIAYARKQVEFQGALEHVKRRRSCIRPHKNFLYSGALDAKKKKTQKYGGVSPEEHPAPEVSTPFPLPPLJ-QALLQAKSKSTGE VIAYARKFYGUNLDRAYDVVKERRTVTKPNPSFHRQLEFYGGILLASFLGLTHGGRDKPHGEKSTEFESVDLVSIPGSPSCCNPFKLLHISH VIAYARKFGUPLEKAYNVVKQKRSITRPNAGFHRQLSFYEGILDASKQRHNKLARQQTDSSLQQPVDDPAGPGDFLPETPDGTPESQL VIAYARKA&Zu-1#.Ay.yVkRsitrPN.gf\$rQl.av.GildAskq.h	LOTYOGIL LETYSGALI LEEYGGILI LSEYEGILI LSEYEGILI	TRSRQSHVUI ORHKNKEKLI ASFLGLIN ASKQRHNKI HRSKQRHNKI	EQKVGGVSI QRSKSETNI GGRDKPHGE LHRQQTDSS	EEHPRPE KSTKORRI KSTEFESI LQQPVOOR	VGGVSPEEHPRPEVSTPFPPLPR KSETNLKSTKÜRRLLPGSEPTPL DKPUGEKSTEFESV—DLVSTPC QQTDSSLQQPVDDPRGPGDFLPP	PEPEGGEEKY LI-QRLNQRKS GSPSCCNPEKL ETPDGTPESQL	KYVGY KYVGY KILHI KI
	521	530	540	550	0	560	570	280	530	009	610		620	630	640	650
0SP-15 RB036834	SQRRPKEE RGVTPDGE	EEPGPRPR GEEEDGSR	SQRAPKEEPGPRPRINLRGVMRSISLLEPSLELEST RGVTPDGEEEDGSRMHRRSIRQKSQRRWVRRSSS BVT TGETV	RSISLLEP IKSQRR	SLELES	TSETSOMPE STSPKTQTR	VFSSHESSHE /VTKQQSQSh	EPL QPFPQL SENLTPERSY	SETSÖMPEVFSSHESSHEEPLQPFPQLRRT-KGGQVORGPQPALKSRQSVVTLQGSRVVANRTQAFQEQEQGGGGGGEPCISSTPRFKVVR TSPKTQTRVVTKQQSGSHENLTPERSVREEPKNRRFPGSHGENYSVTQNQVLHIQKHTPLSVRTRIHDLERHRRDQLPQQPVHTSLTKLTIGTS	VORGPOPAL PGSNGENYS	KSRQSVVTI	LQGSRVVRI CQKHTPLS1	RTQRFQE!	TEGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	SEPCISSTPS SUPVHISL TO	RFRK KLIT
USP-12 USP-12 Consensus	PFLDDAI P+1.P.	FILITAIN PFLDDARADPGLGPPLPCCF P+1+P+++PB+8P+++++++	FILIFOIR PFLDDARQPGLGPPLPCFRRLSDPLLPSPEDE P-1-PPB-8P	RR	-RRLSDPLLP	PSPEDERGSI	LVHLEDPERE	EALLEEAAPP 3l	SPEDEAGSLYHLEDPEREALLEEAAAPPAEYHRPARQPQQGSGLCEKDYKKKLEFGSPKGRSGSLLQYEETEREEGLGAGRAGQLP- 3	PQQGSGI	CEKDVKKI	LEFGSPKGF	SESLLQVI	EETEREEGL (SAGRAGQLP-	
	651	099	670	980	0	630	200	710	720	730	740	746				
DSP-15 RB036834	QASVAD: HLGKSV!	ARSVHOSGEEGER HLGKSVSGSSSGNI	DSRRDSSC	SDVFSSQ	VOSVFRI	KDEGEKRQR	KTHSWTESL	GPSGGIVLO	QASVIDSGEEGER HLGKSVSGSSSGNIDSRRDSSCSDVFSSQVDSVFAKDEGEKRQRRKTHSWTESLGPSGGIVLOPTPQQQKQQSNAILRPRGTRQRELPSRHASUGS	SNRILRPRO	TRORELPSE	SHRSMGS				
USP-13 DSP-12 Consensus	QLDQNL)	LNSENLNN	QLDQNLLMSENLNNNSKRSCPNGMEVGRARI 91ssn.ss.fsc.		HEVGRAI	GLDQNLLMSENLNNNSKRSCPNGMEVGRARPAGNHTPSLPSHS- 9188n.85.	PSHSN	WPTSRSYVG	KAPTSASVVGTTGTRHHTQLIFFYCLLMAPSSHLQGPEGSFTG	LIFFYCLL	IAPSSHLOGF	PEGSFTG				